

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method of processing data which is communicated over a computer network, said method comprising:

pre-allocating portions of a memory to a first network processing offload processor and a second network processing offload processor;

receiving a first packet header data from a first network interface port,

performing a hashing function on said first packet header data to identify said first network processing offload processor and processing only said first packet header's IP layer data on said first network processing offload processor;

receiving a second packet header data from said first network interface port,

performing said hashing function on said second packet header data to identify said second network processing offload processor and processing only said second packet header's network layer data on said second network processing offload processor;

identifying said second network processing offload processor as responsible for handling a first connection that said first packet is a component of;

identifying said first network processing offload processor as being responsible for handling a second connection that said second packet is a component of

processing said first packet header data in said first second network processing offload processor which to executes a first transport layer network protocol stack for said first packet, executing a first socket software program with said first second network processing offload

processor and transmitting a first application data associated with said first packet header data to a host processing system, wherein said first second network processing offload processor communicates with at least one host processor of said host processing system;

~~receiving a second packet header data from said first network interface port,~~ processing said second packet header data in said second first network processing offload processor which to executes a second transport layer network protocol stack, executing a second socket software program with said second first network processing offload processor and transmitting a second application data associated with said second packet header data to said host processing system, wherein said second first network processing offload processor communicates with at least one host processor of said host processing system;

processing of a third packet header data comprising executing a third socket software program with said first network processing offload processor, receiving a third application data from said host processing system and through execution of said first network processing offload processor preparing said third packet header data and causing said third application data and said third packet header data to be transmitted over said computer network through said first network interface port;

processing of a fourth packet header data comprising executing a fourth socket software program with said second network processing offload processor, receiving a fourth application data from said host processing system and through execution of said second network processing offload processor preparing said fourth packet header data associated with said fourth application data and causing said fourth

application data and said fourth packet header data to be transmitted over said computer network through said first network interface port; synchronizing access to said memory by said first and second network processing offload processors; and maintaining a communication channel between said first network processing offload processor and said second network processing offload processor through a message queue.

2. (Original) A method as in claim 1 wherein said first network protocol stack and said second network protocol stack are separate processing threads.
3. (Original) A method as in claim 2 wherein said separate processing threads each comprise separate operating system software processing logic.
4. (Original) A method as in claim 1 wherein said first network protocol stack and said second network protocol stack use the same network protocols.
5. through 8. (Canceled)
9. (Original) A method as in claim 1 wherein said first network interface port comprises an Ethernet interface.
10. through 46 (Canceled).
47. (New) A method as is claim 1 wherein said network layer is IP and said transport layer is TCP.